

Irrigation water quality guidelines <sup>1</sup>				
Potential irrigation water quality problem	Parameter	Degree of restriction on use		
		None	Slight to moderate	Severe
<b>Salinity</b> (affects crop water availability)	ECiw (mmho/cm)	< 0.7	0.7 – 3.0	>3.0
	or TDS (mg/l)	< 450	450 – 2,000	> 2,000
<b>Infiltration</b> (affects water infiltration rate, evaluated by using ECiw and SAR together)	SAR	ECiw (mmho/cm)		
	0 – 3	> 0.7	0.7 – 0.2	< 0.2
	3 – 6	> 1.2	1.2 – 0.3	< 0.3
	6 – 12	> 1.9	1.9 – 0.5	< 0.5
	12 - 20	> 2.9	2.9 – 1.3	< 1.3
	20 - 40	> 5.0	5.0 – 2.9	< 2.9
<b>Specific ion toxicity</b> (affects sensitive crops) (Na <sup>+</sup> ) surface irrigation sprinkler irrigation  (Cl <sup>-</sup> ) surface irrigation sprinkler irrigation  Boron (B)	SARadj	< 3	3 - 9	> 9
	meq/l	< 3	> 3	
	meq/l	< 4	4 – 10	> 10
	meq/l	< 3	> 3	
	ppm/l	< 0.7	0.7 – 3.0	> 3.0
<b>(HCO<sub>3</sub><sup>-</sup>) Bicarbonate</b> (overhead sprinkler only)	meq/l	< 1.5	1.5 – 8.5	> 8.5
<i>Plugging potential from irrigation water used in micro irrigation systems</i>				
<b>PROBLEM</b>	<b>LOW</b>	<b>MEDIUM</b>	<b>SEVERE</b>	
<b><u>Physical</u></b>				
Suspended solids (ppm)	< 50	50 - 100	> 100	
<b><u>Chemical</u></b>				
pH	< 7.0	7.0 – 8.0	>8.0	
TDS (ppm)	< 500	500 – 2,000	> 2000	
Manganese (ppm)	< 0.1	0.1 – 1.5	>1.5	
Iron (ppm)	< 0.1	0.1 – 1.5	>1.5	
Hydrogen sulfide (ppm)	< 0.5	0.5 – 2.0	>2.0	
<b><u>Biological</u></b>				
Bacteria pop. (no./ml)	< 10,000	10,000 – 50,000	> 50,000	

<sup>1</sup> Adapted from Western Fertilizer Handbook, 2002, Ninth edition, California Plant Health Association, Interstate Publishers, Inc., Danville, Illinois.